

WHAT IS CLAIMED IS:

1. A system, comprising:

5 a processor; and

a memory comprising program instructions, wherein the program instructions are executable by the processor to implement a remote procedure call system comprising:

10 a presentation block configured to present data types and Application Programming Interfaces (APIs) available to a program on the system;

15 an encoding block configured to encode representations of those data types as outgoing messages on an interconnect;

a protocol block configured to frame the encodings to denote the intent of the outgoing messages; and

20 a transport block configured to move the encoded and protocol framed outgoing messages from the system to a remote system over the interconnect.

25 2. The system as recited in claim 1,

wherein the transport block is further configured to receive encoded and protocol framed incoming messages from the remote system over the interconnect;

wherein the protocol block is further configured to determine the intent of the encoded and protocol framed incoming messages;

5 wherein the encoding block is further configured to decode representations of data types from the incoming messages; and

wherein the presentation block is further configured to provide the data types from the incoming messages to the program on the system.

10 3. The system as recited in claim 2, wherein, to determine the intent of the encoded and protocol framed incoming messages, the protocol block is further configured to determine if the incoming messages are request messages or response messages.

15 4. The system as recited in claim 2, wherein, to determine the intent of the encoded and protocol framed incoming messages, the protocol block is further configured to determine if the incoming messages are error messages.

5. The system as recited in claim 1, wherein the presentation block is further configured to communicate errors from the remote system to the program on the system.

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6. The system as recited in claim 1, wherein the APIs are configured to provide an interface to the remote procedure call system to the program on the system.

25 7. The system as recited in claim 1, wherein, to encode representations of those data types as outgoing messages on an interconnect, the encoding block is further configured to convert representations of data provided by the program to representations of data for use by the remote procedure call system.

8. The system as recited in claim 1, wherein, to encode representations of those data types as outgoing messages on an interconnect, the encoding block is further configured to generate a text encoding of the data types.

5 9. The system as recited in claim 1, wherein, to encode representations of those data types as outgoing messages on an interconnect, the encoding block is further configured to generate a binary encoding of the data types.

10 10. The system as recited in claim 1, wherein, to frame the encodings to denote the intent of the outgoing messages; the protocol block is further configured to denote if the outgoing messages are request messages or response messages.

11. The system as recited in claim 1, wherein the transport block is further configured to move the encoded and protocol framed outgoing messages from the system to the
15 remote system over the interconnect using TCP/IP.

12. A remote procedure call system, comprising:

20 a presentation block configured to present data types and Application Programming Interfaces (APIs) available to a program;

an encoding block configured to encode representations of those data types as outgoing messages on an interconnect;

25 a protocol block configured to frame the encodings to denote the intent of the outgoing messages; and

a transport block configured to move the encoded and protocol framed outgoing
30 messages from one location to another over the interconnect.

13. The remote procedure call system as recited in claim 12,

wherein the transport block is further configured to receive encoded and protocol
framed incoming messages over the interconnect;

wherein the protocol block is further configured to determine the intent of the
encoded and protocol framed incoming messages;

wherein the encoding block is further configured to decode representations of data
types from the incoming messages; and

wherein the presentation block is further configured to provide the data types from
the incoming messages to the program.

14. The remote procedure call system as recited in claim 13, wherein, to determine the
intent of the encoded and protocol framed incoming messages, the protocol block is
further configured to determine if the incoming messages are request messages or
response messages.

15. The remote procedure call system as recited in claim 13, wherein, to determine the
intent of the encoded and protocol framed incoming messages, the protocol block is
further configured to determine if the incoming messages are error messages.

16. The remote procedure call system as recited in claim 12, wherein the presentation
block is further configured to communicate errors from the other location to the program.

17. The remote procedure call system as recited in claim 12, wherein the APIs are
configured to provide an interface to the remote procedure call system to the program.

18. The remote procedure call system as recited in claim 12, wherein, to encode representations of those data types as outgoing messages on an interconnect, the encoding block is further configured to convert representations of data provided by the program to representations of data for use by the remote procedure call system.

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19. The remote procedure call system as recited in claim 12, wherein, to encode representations of those data types as outgoing messages on an interconnect, the encoding block is further configured to generate a text encoding of the data types.

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20. The remote procedure call system as recited in claim 12, wherein, to encode representations of those data types as outgoing messages on an interconnect, the encoding block is further configured to generate a binary encoding of the data types.

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21. The remote procedure call system as recited in claim 12, wherein, to frame the encodings to denote the intent of the outgoing messages, the protocol block is further configured to denote if the outgoing messages are request messages or response messages.

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22. The system as recited in claim 12, wherein the transport block is further configured to move the encoded and protocol framed outgoing messages over the interconnect using TCP/IP.

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23. A remote procedure call system, comprising:

a server; and

a client comprising:

a client-side presentation block configured to present data types and Application Programming Interfaces (APIs) available to a client program on the client;

5 a client-side encoding block configured to encode representations of those data types as request messages on an interconnect;

a client-side protocol block configured to frame the encodings to denote the intent of the request messages; and

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a client-side transport block configured to move the encoded and protocol framed request messages from the client to the server over the interconnect.

15 24. The remote procedure call system as recited in claim 23, wherein the server comprises:

a server-side transport block configured to receive the encoded and protocol framed request messages from the client over the interconnect;

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a server-side protocol block configured to determine the intent of the encoded and protocol framed request messages;

25 a server-side encoding block configured to decode the representations of the data types from the request messages; and

a server-side presentation block configured to present the data types to a service on the server.

30 25. The remote procedure call system as recited in claim 24,

wherein the server-side presentation block is further configured to receive response data from the service;

5 wherein the server-side encoding block is further configured to encode representations of the response data as response messages on the interconnect;

10 wherein the server-side protocol block is further configured to frame the encodings to denote the intent of the messages; and

wherein the server-side transport block is further configured to move the encoded and protocol framed response messages from the server to the client over the interconnect.

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26. The remote procedure call system as recited in claim 23,

20 wherein the client-side transport block is further configured to receive encoded and protocol framed response messages from the server over the interconnect;

wherein the client-side protocol block is further configured to determine the intent of the encoded and protocol framed response messages;

25 wherein the client-side encoding block is further configured to decode representations of data types from the response messages; and

wherein the client-side presentation block is further configured to provide the data types from the response messages to the client program on the client.

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27. The remote procedure call system as recited in claim 26, wherein, to determine the intent of the encoded and protocol framed response messages, the client-side protocol block is further configured to determine if the response messages are error messages.

5 28. The remote procedure call system as recited in claim 23, wherein the client-side presentation block is further configured to communicate errors from the server to the client program.

29. The remote procedure call system as recited in claim 23, wherein the APIs are
10 configured to provide an interface to the remote procedure call system to the client program.

30. The remote procedure call system as recited in claim 23, wherein, to encode representations of those data types as request messages on an interconnect, the client-side
15 encoding block is further configured to convert representations of data provided by the client program to representations of data for use by the remote procedure call system.

31. The remote procedure call system as recited in claim 23, wherein, to encode representations of those data types as request messages on an interconnect, the client-side
20 encoding block is further configured to generate a text encoding of the data types.

32. The remote procedure call system as recited in claim 23, wherein, to encode representations of those data types as request messages on an interconnect, the client-side
25 encoding block is further configured to generate a binary encoding of the data types.

33. The remote procedure call system as recited in claim 23, wherein the client-side transport block is further configured to move the encoded and protocol framed request messages from the client to the server over the interconnect using TCP/IP.

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34. A remote procedure call system, comprising:

means for presenting data types and Application Programming Interfaces (APIs)
available to a programmer;

means for encoding representations of those data types as messages on an
interconnect;

means for framing the encodings to denote the intent of the messages; and

means for moving the encoded and protocol framed messages from one location
to another over the interconnect.

35. The remote procedure call system as recited in claim 34, further comprising:

means for receiving encoded and protocol framed incoming messages over the
interconnect;

means for determining the intent of the encoded and protocol framed incoming
messages;

means for decoding representations of data types from the incoming messages;
and

means for providing the data types from the incoming messages to a program.

36. A method for implementing a remote procedure call system, comprising:

a presentation block on a system presenting data types and Application Programming Interfaces (APIs) available to a program on the system;

an encoding block on the system encoding representations of those data types as request messages on an interconnect;

a protocol block on the system framing the encodings to denote the intent of the request messages; and

a transport block on the system moving the encoded and protocol framed request messages from the system to a remote system over the interconnect.

37. The method as recited in claim 36, further comprising:

a transport block on the remote system receiving the encoded and protocol framed request messages from the system over the interconnect;

a protocol block on the remote system determining the intent of the encoded and protocol framed request messages;

an encoding block on the remote system decoding the representations of the data types from the request messages; and

a presentation block on the remote system presenting the data types from the request messages to a program on the remote system.

38. The method as recited in claim 37, further comprising:

the presentation block on the remote system receiving response data from the program;

the encoding block on the remote system encoding representations of the response data as response messages on the interconnect;

5 the protocol block on the remote system framing the encodings to denote the intent of the messages; and

the transport block on the remote system moving the encoded and protocol framed response messages from the remote system to the system over the
10 interconnect.

39. The method as recited in claim 36, further comprising:

the transport block on the system receiving encoded and protocol framed response
15 messages from the remote system over the interconnect;

the protocol block on the system determining the intent of the encoded and protocol framed response messages;

20 the encoding block on the system decoding representations of data types from the response messages; and

the presentation block on the system providing the data types from the response messages to the program on the system.

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40. The method as recited in claim 39, wherein said determining the intent of the encoded and protocol framed response messages further comprises the protocol block on the system determining if the response messages are error messages.

41. The method as recited in claim 36, further comprising the presentation block on the system communicating errors from the remote system to the program on the system.

42. The method as recited in claim 36, wherein the APIs are configured to provide an interface to the remote procedure call system to the program on the system.

43. The method as recited in claim 36, wherein said encoding representations of those data types as request messages on an interconnect comprises the encoding block on the system converting representations of data provided by the program on the system to representations of data for use by the remote procedure call system.

44. The method as recited in claim 36, wherein said encoding representations of those data types as request messages on an interconnect comprises the encoding block on the system generating a text encoding of the data types.

45. The method as recited in claim 36, wherein said encoding representations of those data types as request messages on an interconnect comprises the encoding block on the system generating a binary encoding of the data types.

46. The method as recited in claim 36, further comprising the transport block on the system moving the encoded and protocol framed request messages from the system to the remote system over the interconnect using TCP/IP.

47. A computer-accessible medium comprising program instructions for a remote procedure call system, wherein the program instructions are configured to implement:

a presentation block on a system presenting data types and Application Programming Interfaces (APIs) available to a program on the system;

an encoding block on the system encoding representations of those data types as request messages on an interconnect;

5 a protocol block on the system framing the encodings to denote the intent of the request messages; and

a transport block on the system moving the encoded and protocol framed request messages from the system to a remote system over the interconnect.

10 48. The computer-accessible medium as recited in claim 47, wherein the program instructions are further configured to implement:

a transport block on the remote system receiving the encoded and protocol framed request messages from the system over the interconnect;

15 a protocol block on the remote system determining the intent of the encoded and protocol framed request messages;

20 an encoding block on the remote system decoding the representations of the data types from the request messages; and

a presentation block on the remote system presenting the data types from the request messages to a program on the remote system.

25 49. The computer-accessible medium as recited in claim 48, wherein the program instructions are further configured to implement:

the presentation block on the remote system receiving response data from the program;

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the encoding block on the remote system encoding representations of the response data as response messages on the interconnect;

the protocol block on the remote system framing the encodings to denote the intent of the messages; and

the transport block on the remote system moving the encoded and protocol framed response messages from the remote system to the system over the interconnect.

50. The computer-accessible medium as recited in claim 47, wherein the program instructions are further configured to implement:

the transport block on the system receiving encoded and protocol framed response messages from the remote system over the interconnect;

the protocol block on the system determining the intent of the encoded and protocol framed response messages;

the encoding block on the system decoding representations of data types from the response messages; and

the presentation block on the system providing the data types from the response messages to the program on the system.

51. The computer-accessible medium as recited in claim 50, wherein, in said determining the intent of the encoded and protocol framed response messages, the program instructions are further configured to implement the protocol block on the system determining if the response messages are error messages.

52. The computer-accessible medium as recited in claim 47, wherein the program instructions are further configured to implement the presentation block on the system communicating errors from the remote system to the program on the system.

5 53. The computer-accessible medium as recited in claim 47, wherein the APIs are configured to provide an interface to the remote procedure call system to the program on the system.

10 54. The computer-accessible medium as recited in claim 47, wherein, in said encoding representations of those data types as request messages on an interconnect, the program instructions are further configured to implement the encoding block on the system converting representations of data provided by the program on the system to representations of data for use by the remote procedure call system.

15 55. The computer-accessible medium as recited in claim 47, wherein, in said encoding representations of those data types as request messages on an interconnect, the program instructions are further configured to implement the encoding block on the system generating a text encoding of the data types.

20 56. The computer-accessible medium as recited in claim 47, wherein, in said encoding representations of those data types as request messages on an interconnect, the program instructions are further configured to implement the encoding block on the system generating a binary encoding of the data types.

25 57. The computer-accessible medium as recited in claim 47, wherein the program instructions are further configured to implement the transport block on the system moving the encoded and protocol framed request messages from the system to the remote system over the interconnect using TCP/IP.